## MAY 1 7 2004 IN THE UNITED STATES PATENT AND TRADEMARK OFFICE TRADEMARK

In re Patent Application of

ARDAVAN et al.

Atty. Ref.: 117-342

Serial No. 09/786,507

TC/A.U.: 2881

Filed: March 6, 2001

Examiner: B. Souw

For: APPARATUS FOR GENERATING FOCUSED ELECTROMAGNETIC

**RADIATION** 

\* \* \* \* \* \*

May 17, 2004

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

Sir:

## **INFORMATION DISCLOSURE STATEMENT**

As suggested by 37 C.F.R. 1.97, the undersigned attorney brings to the attention of the Patent and Trademark Office the references listed on the attached form PTO-1449, a copy of each of which is enclosed.

The Examiner is requested to initial the attached form PTO-1449 and to return a copy of the initialed document to the undersigned as an indication that the attached references have been considered and made of record.

A check for \$180.00 is attached for the fee.

Respectfully submitted,

NIXON & VANDERHYE P.C.

05/18/2004 TBESHAH1 00000021 09786507

03 FC:1806

180.00 OP

By:

John R. Lastova

Reg. No. 33,149

JRL:at

1100 North Glebe Road, 8th Floor

Arlington, VA 22201-4714 Telephone: (703) 816-4000

Facsimile: (703) 816-4100

INFORM	ATION DISCLOSURE	ATTY. DO	CKET NO.	SERIAL NO.		<del></del>	
IIII OIIIII	CITATION	117-34	2	09/786,507			
		APPLICAN		09//80,30/			
	17	1000					
•	MAT '	. <u></u> ≨NRDA	VAN et al.				
(Use s	everal sheets if necessary)	FILING DA	TE	TC/A.U.			
	TRADE	March March	6, 2001	2881			
			DATENT DOCUMENTS				
AMINER	DOOL MENT AN ADED		. PATENT DOCUMENTS				DATE
IITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	IF APPR	OPRIAT
		FORE	GN PATENT DOCUMENTS		1		
	DOCUMENT	DATE	COUNTRY	CLASS	CUBCLACE		LATION
	DOCUMENT	DATE	COUNTRY	CLASS	SUBCLASS	YES	NO
<u> </u>							<u> </u>
<del></del>							
+	<del>                                     </del>	<del></del>				 	<del>                                     </del>
							-
	OTHER DOCL	IMENTS (incl	uding Author, Title, Date, Perti	inent pages e	tc)	L	L
$\overline{}$	Bolotovskii and Ginzbur	g, "The Vavilo	v-Cerenkov Effect and the Doppler	Effect in the Mo	tion of Sour	ces with	
	Superluminal Velocity is	n Vacuum"; So	viet Physics Uspekhi, Vol. 15, No. 2	2, September - O	ctober 1972.		
	M. Durrani, "Revolution	ary Device Pol	arizes Opinions", Physics World, A	ugust 2000, page	e 9		
			lsar"; The Economist, 19 August 20				
<u> </u>			peed", New Scientist, April 2001, p				
	E. Cartlidge, "Futuristic	Device Defies	Law", Physics World, February 200	01, page 6.			
	E. Cartlidge, "Money Sp	oinner or Loopy	Idea?", Science, September 2003, J	page 1463.			
	A. Ardavan, H. Ardavan	, J. Singleton "	Response", Letters, Science, 16 January	uary 2004, pages	310 and 31	<u>l.</u>	
	31.	Relativistic Pul	sar Wind", Publications of the Astro	onomical Society	y of Australia	ı, 1998, 1	5, 328
·	·	n "Method of H	andling the Divergences in the Rad	iation Theory of	Courage The	t Maya T	Zantan
ŀ	Than Their Waves." ww	w.phv.bris.ac.u	k/research/theory/hannay2.pdf.	iation Theory of	Sources Tha	i Move r	aster
	J. Hannay, "Faster Than	The Speed of I	Light," www.phy.bris.ac.uk/research	/theory/hannayl	.pdf.		
	S. Rosenbaum, "Divergi	ng Opinions"; I	Letter, Physics World, October 2000	), page 20.	<u></u>		
	A. Hewish, "Comment I	on "Generation	of Focused, Nonspherically Decay		ectromagneti	c Radiati	on";
	Physical Review E, Vol.						
			n of Focused, Nonspherically Decay	ing Pulses of Ele	ectromagneti	c Radiati	on";
			ust 2000, page 3008 and 3009.				
ŀ	Radiation": Physical Par	omments on "C	Generation of Focused, Nonspherica, No. 2, August 2000, page 3010 to	illy Decaying Pu	lses of Electr	omagnet	ic
			andling the Divergences in the Radi		Courses The	· Mous T	la atau
	Than Their Waves". Jou	rnal Mathematic	cal Physics, Vol. 42, No. 8, August	2001 nage 3973	Sources 111a 1 to 3074	i Move F	aster
	J. Hannay, "Bounds on F	ields from Fast	Rotating Sources, and Others", Pro	eedings: Mathe	matical Phys	sical and	
	Engineering Sciences, V	ol. 452, No. 19	53, Oct. 8, 1996, page 2351 to 2354			ui uiiu	
	Myers, et al., "Fun with	Pulses", Physic	s World, November 1990, page 39 t	to 42.			
	Uehara and Kikuchi, "Go	eneration of Ne	arly Diffraction-Free Laser Beams"	; Applied Physic	s, B46, 125 t	o 129 (1	989).
	J. Lu, "Experimental Ver	ification of No	ndiffracting X Waves", IEEE Trans	actions on Ultra	sonics, Ferro	electrics,	and
	Frequency Control, Vol.	39, No. 3, May	1992, page 441.				

1	1	•	1
*Examiner		Date Considered	
LAMITIO	<u></u>	Date Considered	

Hernandez, Ziolkowski, and Parker, "Synthesis of the Driving Functions of an Array for Propagating Localized Wave
 Energy", Journal of Acoustical Society of America, 92(1), July 1992, page 550.
 Heyman and Steinberg, "Spectral Analysis of Focus Wave Modes", Journal of the Optical Society of America A, Volume
4, No. 11, November 1987, page 2081.
 Lapointe, "Review of Non-Diffracting Bessel Beam Experiments", Optics and Laser Technology, Vol. 24, No. 6, 1992,
page 315.
Ziolkowski and Lewis, "Verification of the Localized-Wave Transmission Effect", Journal of Applied Physics, 68(12), 13
December 1990, page 6083.
J. Lu, Zou and Greenleaf, "A New Approach to Obtain Limited Diffraction Beams", IEEE Transactions on Ultrasonics,
Ferroelectrics and Frequency Control, Vol. 42, No. 5, September 1995, page 850.
Donnelly et al, "Graphical Simulation of Superluminal Acoustic Localized Wave Pulses", IEEE Transactions on
Ultrasonics, Ferroelectrics and Frequency Control, Vol. 41, No. 1, January 1994, page 7.
Herman and Wiggins, "Production and Uses of Diffractionless Beams", Journal of the Optical Society of America A, Vol
8, No. 6, June 1991, page 932.
Generation Of Focused, Nonspherically Decaying Pulses Of Electromagnetic Radiation, Physical Review E, Vol. 58, No.
 5, November 1998, The American Physical Society, H. Ardavan, XP-00874625, 1998.
 Problems With the Superluminal Pulsar Model, A. Hewish, XP-000874701, 1996.
Radiation by Charges Moving Faster than Light, Bolotovskii, Methodological Notes XP-0086719, Sov. Phys. 33 (6), June 1990.
 Frequency Spectrum of Focused Broadband Pulses of Electromagnetic Radiation Generated by Polarization Currents with
Superluminally Rotating Distribution Patterns, Ardavan et al., Vol. 20, No. 11, November 2003, J. Opt. Soc. Am.
 Spectrial and Polarization Characteristics of the Nonspherically Decaying Radiation Gnerated by Polarization Currents
 with Superluminally Rotating Distribution Patterns, (proof copy), Ardavan et al., Vol. 21, No. 5, J. Opt. Soc. Am.
Experimental Demonstration of a new Radiation Mechanism: Emission by an Oscillating, Accelerated, Superluminal
Polarization Current, A. Ardavan et al.
Lasers, Siegman, Oxford University Press, 1986, pages 669-671.

\*Examiner Date Considered